

State Water Resources Control Board

UNDERGROUND STORAGE TANK (UST) CASE CLOSURE SUMMARY

Agency Information

Agency Name: Santa Ana Regional Water Quality Control Board (Santa Ana Water Board)	Address: 3737 Main Street, Suite 500 Riverside, CA 92501-3348
Agency Caseworker: Gongde Chen	Case No.: 083002016T

Case Information

UST Cleanup Fund (Fund) Claim No.: 9590	Global ID: T0605901505
Site Name: UNOCAL #5356	Site Address: 1913 West Edinger Avenue Santa Ana, CA 92704 (Site)
Responsible Party: Union Oil Company of California Attention: Atir Chak	Address: 1600 West Anaheim Street Wilmington, CA 90744
Fund Expenditures to Date: \$629,422	Number of Years Case Open: 33

GeoTracker Case Record: <http://geotracker.waterboards.ca.gov/?gid=T0605901505>

Summary

The Low-Threat Underground Storage Tank Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy because they pose a low threat to human health, safety, and the environment. The Site meets all of the required criteria of the Policy and therefore, is subject to closure.

The Site currently operates as an active gasoline and diesel service station. In 1992, an unauthorized release from a product line was discovered during the installation of a monitoring well. The affected line was repaired and half a ton of contaminated soil was excavated and disposed off-site. In November 1995, infrastructure upgrades uncovered additional hydrocarbon-impacted soil, resulting in the removal of 1,153 tons of soil before new dispenser islands and product piping were installed. The station's current facilities include two 15,000-gallon gasoline USTs, one 12,000-gallon diesel UST, six fuel dispenser islands, and associated product piping.

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Between December 1997 and February 2001, 21,757 gallons of hydrocarbon-impacted groundwater near the USTs were periodically extracted and treated. From February 25 to August 19, 2005, weekly Enhanced Fluid Recovery (EFR) activities removed and disposed of 13,170 gallons of impacted groundwater. This was followed by seven additional EFR events from April 13 to May 25, 2006, which recovered 3,819 gallons. A groundwater pump-and-treat system operated from December 2008 to February 2012, extracting and treating approximately 1.7 million gallons. An ozone sparge system operated from April 2003 to February 2012, injecting 637 pounds of ozone into the subsurface. Most recently, an air sparge system ran from December 2021 to March 2023 to remediate residual tertiary butyl ether in groundwater beneath the Site.

Since 1992, a network of 23 monitoring wells, seven triple-nested piezometers, and four vapor extraction wells have been installed and routinely monitored. No free product has been detected in monitoring wells since 2022. Groundwater monitoring through 2023 and early 2024 indicates that the remaining petroleum hydrocarbon contaminant plume is stable and measures less than 250 feet in length. In 2008, a risk assessment was conducted to evaluate the potential health risks to school children and staff at the Carr Intermediate School, located downgradient of the Site. Petroleum constituents in soil and vapor samples taken on the school's property meet the residential standards outlined in the Policy.

The remaining petroleum constituents are limited, stable, and decreasing. Additional assessment would be unnecessary and will not likely change the conceptual model. Any remaining petroleum constituents do not pose significant risk to human health, safety, or the environment under current conditions.

Rationale for Closure Under the Policy

- **General Criteria** – Site **MEETS ALL EIGHT GENERAL CRITERIA** under the Policy.
- **Groundwater Media-Specific Criteria** – Site meets the criteria in **Class 2**. The contaminant plume that exceeds water quality objectives is less than 250 feet in length. There is no free product. The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary. The dissolved concentration of benzene is less than 3,000 micrograms per liter ($\mu\text{g/L}$), and the dissolved concentration of MTBE is less than 1,000 $\mu\text{g/L}$.
- **Petroleum Vapor Intrusion to Indoor Air** – Site meets **Criteria 2 (a), Scenario 3**. As applicable, the extent of the bioattenuation zone, oxygen concentrations in soil gas, concentrations of total petroleum hydrocarbons as gasoline and diesel combined in soil, and dissolved concentrations of benzene in groundwater meet the Policy.
- **Direct Contact and Outdoor Air Exposure** – Site meets **Criteria 3 (a)**. Maximum concentrations of petroleum constituents in soil from confirmation soil samples are less than or equal to those listed in Table 1 of the Policy.

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Recommendation for Closure

The corrective action performed at this Site ensures the protection of human health, safety, and the environment. The corrective action performed at this Site is consistent with chapter 6.7 of division 20 of the Health and Safety Code, implementing regulations, applicable state policies for water quality control and applicable water quality control plans. Case closure is recommended.

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